

Mayoral Fellowship Report on Baltimore's Sidewalk Policies With a Recommended Policy Change

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Mayoral Fellowship Report on Sidewalks in Baltimore

Executive Summary

Current policy in Baltimore City places the responsibility on property owners to complete sidewalk repairs when necessary and pay the associated costs. The repair process outlined in Article 26 of the City Charter allows residents to submit a repair request through 311, whereupon a DOT inspector investigates the sidewalk and determines if it needs repair. If the sidewalk needs repair, a DOT contractor will repair the sidewalk at that property, and typically about three other properties surrounding it, and proportionally charge each property owner for their share of the bill. This process is highly reactive because it places a substantial burden on property owners to identify repair needs and pay for necessary work. These may be repairs that property owners might not want or can afford to pay for.

Research was conducted into how ten other cities of similar population size and/or geographic location to Baltimore handle their sidewalk systems. This information was used to inform a recommended policy change. The final recommendation is that Baltimore City take on 100 percent of the responsibility of sidewalk repairs and its associated costs. Additionally, Baltimore City should attempt to transition away from using 311 and the backlog waiting list it creates to identify locations for repair contracts. Baltimore could move away from using 311 entirely and drop the backlog waiting list in favor of proactive inspections using the protocol developed in the Complete Streets Manual. Instead of totally dropping 311, Baltimore could pilot a program like INSPIRE to begin proactive inspections in previously neglected, distressed neighborhoods while still prioritizing repairs from the 311 backlog. By taking on complete responsibility for sidewalk repairs and shifting towards a more proactive inspection model, Baltimore will reduce much of the administrative burden of the current system, reduce the need for a property owner compliance system, allow for sidewalk safety, and begin moving towards the goals outlined in the Complete Streets Manual.

Introduction: The Case for Sidewalks

Sidewalks are an essential resource for a functioning City. Every person is a pedestrian and most people use the sidewalk everyday, whether they are walking to their car, a transit station, the grocery store, school or work. Sidewalks provide access to parks, libraries, hospitals, and myriad other destinations. They can be used for exercise, shopping, and socializing among community members. Sidewalks are particularly important for people without access to a personal vehicle, including children traveling to and from school. Sidewalks in good repair are also important for seniors and persons with limited mobility, such as those who use a cane, wheelchair, or scooter.

Sidewalks reduce pedestrian exposure to motor vehicle traffic. According to the [Federal Highway Administration](#), nearly 4,500 pedestrians are killed in traffic crashes with motor vehicles in the US each year. Constructing good sidewalks can make walking a more viable transportation option by limiting the amount of unnecessary traffic-related deaths. The following [research from the AARP](#) demonstrates just how important well-maintained sidewalks can be to communities:

- Sidewalks that are in good condition are more likely to be used, and pedestrian activity has been shown to reduce crime. An [FHWA study](#) of paved trails found that of the 372 trails studied, which cover 7,000 miles of trail and nearly 45 million annual users, only three percent of responded trails saw major crimes like muggings and assault. In addition, only about ¼ of trails saw minor crimes like graffiti and littering. Paved trails like sidewalks bring more people out to naturally survey the street and keep criminals away.
- Sidewalks encourage physical activity. People who live in neighborhoods with sidewalks are 47 percent more likely to be active for about 40 minutes a day, in comparison to residents of neighborhoods without sidewalks.
- Walkable communities support local businesses. When people decide to walk instead of drive, they visit local businesses more often and the slower pace of walking encourages more spending and lingering in economic centers. Retail properties with strong walkability ratings see much higher property values and net operating incomes when compared to retail properties with poorer walkability ratings.
- The growing preference for walkable communities among prospective home buyers translates into higher housing prices. A well built sidewalk for a typical property can return up to 15 times the investment in home resale value. AARP did a study comparing two nearly identical houses, except one house had a well maintained sidewalk and two street trees. The house with the sidewalk and trees typically sold for between \$4,000 and \$34,000 more and it sold in less time.

As portrayed above, a sidewalk system that is prioritized and in good repair has numerous benefits to the community.

The current sidewalk policy in Baltimore City places the financial burden on property owners to maintain the sidewalk adjacent to their property. For many property owners, the cost of repairing a sidewalk is a substantial financial obstacle. Baltimore City's Complete Streets Manual proposes a change in the project prioritization process to promote equity when the City completes transportation projects. In order for this emphasis on equity in infrastructure and transportation to take place, Baltimore needs to change its funding policy to shift the burden from property owners to the City. By assuming the responsibility of paying for sidewalks, Baltimore City will lead the nation in

prioritizing sidewalks as a necessary public good that everyone is entitled to, and not a luxury that only wealthy property owners can afford to have.

Baltimore City's Existing Policies and Procedures Regarding Sidewalks

In Baltimore, the Department of Transportation (DOT) has the power to grade and regulate all sidewalks, but it is the adjacent property owner that is responsible for the maintenance and upkeep of the sidewalk. The property owner adjacent to a City sidewalk is responsible for payment of work done by either a private contractor or the Department of Transportation's contractor. If sidewalk improvements are completed by a DOT contractor, a notice of assessment is issued to property owners and reported to the Finance Department for collection. The only exception to this policy is when the sidewalk is clearly damaged by a City tree. When a sidewalk needs repair, City inspectors visit the location to determine whether the damage is caused by a City tree. When the sidewalk is damaged by a City tree, the City is responsible for covering 100 percent of the cost of the repairs. Between 55 and 70 percent of repairs fall into this category.

Sidewalk repairs are identified and prioritized based on 311 requests. The City currently has a backlog of over 6,700 requests for sidewalk work. This system of inspection and prioritization is highly reactive, and the City is looking to develop a more proactive approach to identifying sidewalk repair needs. With that in mind, a condition assessment protocol has been developed in Baltimore's Complete Streets Manual.

The budget for the Sidewalk Reconstruction program is outlined in the Capital Improvement Plan with a breakdown of funding sources. For Fiscal Year 2021, the Board of Estimates approved \$4,000,000 in the capital budget for sidewalk repair and reconstruction. \$3,000,000 is funded through General Obligation Bonds, which are voter-approved bonds that the City uses to maintain high priority capital assets and programs. The additional \$1,000,000 is funded through private payments from property owners. This level of funding is the highest level of funding in recent years. For Fiscal Year 2020, the Board of Estimates approved \$3,132,000 for sidewalks, and in the years before that, DOT rarely received more than \$1,000,000 for sidewalks. At this level of funding with 25 percent coming from property owner payments, it would take at least 8 years to work through the backlog of sidewalk requests. At this level of funding from General Obligation Bonds only, it would take at least 11 years to work through the backlog of sidewalk requests.

A more detailed outline of the existing policies and procedures regarding sidewalks in Baltimore can be found in Appendix A. A flow chart detailing the sidewalk repair process outlined in Article 26 of the Baltimore City Charter can be found in Appendix B.

Outside Sidewalk Research

Research was conducted into how 10 cities across the country, many with similar population sizes and/or geographic locations to Baltimore, handle their sidewalks. The research was divided into four categories: maintenance responsibility, funding, project identification, and project prioritization. Highlights of the research can be found below. A more detailed outline of the research can be found in Appendix C.

Maintenance Responsibility:

The responsibility for sidewalk maintenance among researched cities is split between full property owner responsibility and full city responsibility. Most cities place the burden of maintenance responsibility on property owners, including the following: St. Louis, Philadelphia, Memphis, Columbus, Denver, Detroit, and New York City. Fewer cities place the burden of maintenance responsibility on the City, including: Washington DC, Boston (except when the sidewalk damage is associated with utility work or construction), and New Orleans (except when the property owner directly damages the sidewalk).

Funding:

Cities typically use Federal Highway Administration (FHWA) grants and programs, General Obligation (GO) Bonds, state grants and programs, and/or private payments to fund sidewalk repairs. Some cities have unique cost sharing models to help property owners cover the costs of sidewalk repairs. Other cities have programs that property owners can apply for to receive repair aid, affordability discounts, and extended repayment assistance. Many cities have policies where if the sidewalk is damaged by a City tree, the City pays for the cost of repairs. The highlights of the research are described below.

- Washington DC: The City receives Federal Highway Administration (FHWA) funding for work on federal routes. There is a pot of money to do work on local roads, which amounts to about \$20,000,000 for Fiscal Year 2021.
- St. Louis: Property owners can use the 50/50 sidewalk program, where the City and property owners split the cost of repairs evenly. The program is funded by council members through their council district capital allocations from the City. For Fiscal Year 2021, each council member gets about \$145,000 to fund numerous capital projects, including the 50/50 sidewalk program. If the sidewalk is damaged by a City tree, the City is 100% responsible for repair costs.
- Philadelphia: The total amount that property owners as a group are required to pay cannot exceed 30% of the total cost of the project. The City is responsible for covering the remaining 70%.

- New Orleans: Residents only pay for sidewalk repairs if they directly impact, damage, or remove the sidewalk, such as doing utility service connections. Two neighborhoods, the French Quarter and Downtown, have special taxes for infrastructure repairs. DPW manages the funds from these taxes to determine how it will be spent. DPW typically receives between five and fifteen million dollars each year for general enhancement projects like sidewalk repairs and street lighting work.
- Memphis: Property owners are responsible for any costs of repair and maintenance. The City offers financial assistance to certain residential property owners based on age, physical ability, and income, but residents have to apply for the assistance.
- Boston: Sidewalk funding comes from Massachusetts Highway Department Chapter 90 funds and General Obligation Bonds. Boston also has a Transportation Infrastructure Enhancement Fund, in which transportation network companies like Uber and Lyft annually submit an assessment based on the number of rides from the previous year. For Fiscal Year 2021, Boston budgeted \$3,000,000 for sidewalk reconstruction in the capital budget.
- Columbus: Property owners may qualify for a sidewalk repair grant. The grant program makes funds available to low-income residential property owners to help them pay for repairs. Grantees receive up to \$2500 or the cost of approved repairs, whichever is less. Grants are dependent on the availability of funds and property owners are responsible for payment of any repairs in excess of their grant. Eligible residential properties must have a total household income of 80% or less of the area median income, with adjustments for household size.
- Denver: The City offers extended repayment assistance and affordability discounts to qualified property owners. The affordability discount is a scaled discount for households based on income level and the repayment assistance program allows property owners up to five years to repay the City for any repairs. For Fiscal Year 2020, Denver budgeted \$3,000,000 for the sidewalk gap and safety repair program. Denver budgeted an additional \$850,000 for the Sidewalk Repair Revolving Fund, which funds zone-based inspections, the extended repayment program, and the affordability discounts.
- New York City: Any assistance from the City for sidewalk repair is only available for sidewalks adjacent to 1/2/3 family homes occupied by the owner. Commercial property owners must always complete their own repairs. DOT does not charge property owners for repairs to sidewalks damaged by a City tree.

Project Identification:

All cities used 311 to identify sidewalk repair projects, but only one of the ten researched cities, Denver, uses other means to identify additional locations for repair. Inspectors investigate request locations after they are identified to make sure that the requests are warranted of repair. Almost all cities have a mechanism in place to ensure that repairs are completed if the property owner fails to make the repairs themselves. This mechanism oftentimes allows cities to contract out sidewalk repairs and charge property owners for the repair costs. The highlights of the research are described below.

- Washington DC: The City uses 311 and an online request form to identify repair projects. Property owners provide information about the type of sidewalk material and the severity of the damage. Inspectors survey requests daily and determine if repairs are warranted.
- St. Louis: Property owners submit a repair request through 311 and an inspector assesses the condition of the sidewalk. If the sidewalk needs repair, properties are placed on the sidewalk program waiting list in their council district. The length of the waiting list depends upon the funds available in each district and the number of outstanding requests.
- Philadelphia: Property owners issue complaints through 311. The sidewalk is then inspected and if it is deficient, the property owner is mailed a notice. The property owner has 30 days to address the defect, but there is no recourse for the City to make sure that the sidewalk is repaired.
- New Orleans: Sidewalk repairs are identified through 311. Inspectors look at 311 requests daily and use a condition assessment protocol to prioritize repair locations. If the sidewalk is in such disrepair that it cannot be fixed through the typical DPW protocol, it is placed into a capital improvement bond-funded project.
- Memphis: Service requests are made through 311. The City then notifies property owners of their responsibility. If the property owner fails to comply with the notice, the City fixes the sidewalk and charges the property owner through their city tax bill.
- Boston: Sidewalk repairs are identified through annual improvement contracts, 311 spot repairs, and constituent sidewalk deposits. Constituent sidewalk deposits are deposits that property owners making repairs themselves give to the City to ensure that if the sidewalk is built incorrectly, the City has the funds to make the necessary repairs. There are regular sidewalk condition assessments to find locations that need repair.
- Columbus: Residents put in a request through 311 to repair the sidewalk.
- Denver: Inspectors divide the city into 11 regions for zone based sidewalk inspections. Inspectors offer property owners information on repair requirements, extended repayment, estimated costs, and the affordability program. Property

owners outside the inspection region can submit 311 requests, but are not eligible for City assistance.

- Detroit: Sidewalk damage can be reported through 311 or an online arcGIS Sidewalk Damage Reporter Map.
- New York City: Property owners use 311 to submit sidewalk repair needs. When a complaint is made, DOT inspectors inspect the sidewalk at that location and the entire sidewalk on that side of the block. If an inspector finds a defect with the sidewalk, DOT sends a notice of violation and a preliminary inspection report (an illustration of the sidewalk and the location of the defect) to the property owner. The notice allows property owners 75 days to repair the sidewalk through a private contractor or defer to the city contractor.

Project Prioritization:

Most cities use criteria such as the age of outstanding request, the condition of the sidewalk, the location of the sidewalk, and the vulnerability of local populations when prioritizing sidewalk repairs. Boston, Columbus, Denver, and Memphis use some variation of a social vulnerability index, which considers factors like the number of seniors, young children, and low-income people in an area, when prioritizing which regions get inspected first, how much property owners pay, and/or how much assistance the City provides. The highlights of the research are outlined below.

- Washington DC: The City considers the age of outstanding service requests and the proximity of sensitive populations to amenities like rec centers and schools when prioritizing locations for sidewalk repair.
- St. Louis: Repairs are first-come, first-served based on the waiting list in each district. Councilmembers determine how much of their capital improvement budget goes to the sidewalk repair program.
- Philadelphia: Projects are prioritized based upon 311 requests and action from property owners to respond to notices.
- New Orleans: Priority is given to critical sidewalks from the condition assessment.
- Memphis: Projects are prioritized by City crews depending on when notices are mailed out and if property owners complete their own repairs.
- Boston: Boston has the Streetcaster Program, which aims to create sidewalk networks in previously neglected neighborhoods due to 311. The program shifts response framework to proactive inspecting based on a social vulnerability score that accounts for factors like the number of low income people in an area.
- Columbus: The criteria that the City uses to evaluate and prioritize 311 requests for new sidewalk construction include sidewalk route continuity and the location

proximity to schools and parks. Requests that score the highest are the first to be considered for future sidewalk projects, which are all based on available funding.

- Denver: The order for which regions are inspected first is prioritized based on criteria such as which regions have the lowest rates of car ownership and which regions have the highest populations of youth and seniors.
- Detroit: If the City elects to make repairs, they are prioritized based on the rating of the damage, available funding, and other factors.
- New York City: Property owners of 1/2/3 family homes may apply for DOT's Expedited Sidewalk Repair Program. If approved, DOT begins repairs within 90 days of processing the request and charges property owners.

Sidewalk Policy Recommendation

After conducting research into the sidewalk policies and procedures of 10 outside cities, it is recommended that Baltimore adopt a policy where the City covers 100 percent of the cost of sidewalk repairs for residential property owners. This new policy would shift the burden from property owners to the City to complete any necessary sidewalk repairs through City contractors and pay the associated costs. Adopting this policy would make Baltimore City a leader in equitable transportation policy and help to transform the image of the sidewalk from one of wealth-associated luxury to one of necessary civic infrastructure. Outlined below are the potential benefits and constraints of transitioning to a system where the City covers 100 percent of the cost of sidewalk repairs.

Benefits

- A policy change would allow for project prioritization in communities that are identified in the Complete Streets Manual.
- City responsibility would ensure sidewalk safety. Since all of the sidewalk repairs would be made by City contractors, they would make sure to complete their work with City and ADA standards in mind.
- City responsibility for sidewalks would enable economies of scale that are not available to property owners who complete their own repairs, making repairs more cost effective.
- City responsibility would take away the need for a property owner compliance system.
- Changing the policy would help to reduce the administrative work associated with Baltimore's current policies. City inspectors spend a tremendous amount of time writing and issuing repair notices, handling property owner appeals, and issuing cost assessments after repair work is completed. Inspectors could save a significant amount of time if they did not have to do these things. That time could

be spent doing post-construction inspections or transitioning to a proactive inspection model.

Constraints

- Changing the policy would require a change to the City Code. The process for going about changing the City Code requires a vote by the City Council.
- City responsibility would require significant additional funding to ensure that repair crews could respond to repair needs in a timely fashion.
- Commercial property owners usually fix their sidewalks. A policy change could mean that owners of office buildings and large apartment buildings stop paying for their own repairs.
- A policy change will likely lead to more claims, as homeowners would no longer have to bear the cost of the repairs. The current backlog for sidewalk repairs is quite long and changing the policy will mean that claims will be added to the list far more quickly than the City can make repairs. This would make it more difficult to transition from a reactive inspection model to a more proactive inspection model.

In response to some of the constraints associated with changing the policy, there are actions the City can take to ensure that these issues are accounted for. One step the City could take to ensure that commercial property owners continue to repair their sidewalks is to follow the New York City model and make the new policy only applicable to 1/2/3 family homes. Commercial and 4+ family residential properties would still be responsible for sidewalk maintenance. The City could also have a separate waiting list for residential and commercial properties to make sure that all residents of the City are considered for repairs.

Because of the potential for a growing backlog waiting list, the City would have a difficult time shifting inspections from a reactive to a proactive model if the recommendations were to be adopted. One potential solution is to eliminate the backlog altogether and start fresh using the new project prioritization process in the Complete Streets Manual to identify where sidewalk repairs would take place. Another potential solution is to use the time that inspectors previously spent handling notices, cost assessments, and appeals on proactive inspections. 311 is effective for helping to identify repair needs, but the data can be skewed based on where the requests are coming from.

An analysis of Baltimore City's 311 response to requests for alley cleanup by [the Baltimore Sun](#) found that southeast neighborhoods like Fells Point and Canton saw their requests handled and closed within the recommended period at a much higher rate than most other neighborhoods in the City. Some of the discrepancies in service have been

dealt with in recent months, but that does not take away from how many City residents feel about 311. Residents may be hesitant to call 311 or submit a service request if they have not previously had a positive experience with the City government or trust that the system is working in their favor.

To combat the issues associated with 311, a pilot program could be started where \$100,000 to \$200,000 of the funding from the Sidewalk Reconstruction line item in the capital budget could be used to have an inspector begin proactive inspections in distressed neighborhoods. This pilot program would help to prioritize equity in distressed neighborhoods while also still prioritizing the backlog. The INSPIRE program is a current example that could be used to model a new program. INSPIRE prioritizes repairing infrastructure like sidewalks along primary walking routes to schools being reconstructed under the 21st Century Schools Program. If the pilot program is successful, it could even become its own line item in the budget like the INSPIRE program.

The constraints around funding sidewalk repairs and changing the City Code remain very present. However, it remains pertinent that despite potential challenges to changing the policy, we must proceed. Sidewalks are a vital component of community infrastructure that help boost economic development, improve home values, foster physical activity, and better community health. Having the City change the sidewalk repair policy is a monumental step in achieving the goals of safety, equity, mobility, and economic vitality outlined in the Complete Streets Manual. Having Baltimore City take over the responsibility for funding and completing sidewalk repairs indicates the City is changing and doing it for the better.

Appendix A: Baltimore City's Existing Policies and Procedures Regarding Sidewalks

Responsibility of Payment

The property owner adjacent to a City sidewalk is responsible for payment of work done to the sidewalk by the Department of Transportation (DOT).

Article 7 of the Baltimore City Charter outlines the powers and duties of the Executive Departments of the Mayor's Office, including the Department of Transportation. Subtitle 116A of Article 7 establishes the following power of the DOT in relation to the opening, extension, widening, straightening, closing, or grading of a street, alley, or sidewalk:

- If the ordinance does not provide otherwise, property owners may pay the assessment all at once or in 5 equal deferred annual installments.

Article 26 of the Baltimore City Code provides additional details about the responsibility of payment. The following sections are relevant to payment:

- *Subtitle 10 Section 5*
 - Mandates that the Department of Transportation produce records about the sidewalk repair work being done, including the total cost to be assessed against each abutting property.

Responsibility for Maintenance and Repair

The Department of Transportation has the power to grade and regulate all sidewalks, but it is the adjacent property owner that is responsible for the maintenance and upkeep of the sidewalk.

Article 26 of the Baltimore City Code provides specific details about sidewalks and the Department of Transportation's role in their upkeep. The following sections and responsibilities are relevant to maintenance:

- *Subtitle 9 Section 3*
 - Provides the Director of Transportation full power to grade and regulate the footways of all paved streets in the City.
- *Subtitle 10 Section 1*
 - Provides the Director of Transportation the power to provide notice to property owners if the sidewalk adjacent to their property is not properly graded and paved, is in bad repair, is in a defective condition, or is inconsistent with a streetscape plan.
 - Provides the Director of Transportation the power to provide property owners notice of the DOT's intent to repair a sidewalk adjacent to their property.
- *Subtitle 10 Section 3*
 - Allows the property owner to fix the sidewalk or have a DOT contracted crew fix it, provided no appeals are made by the property owner and/or approval of the project is given by the Board of Municipal and Zoning Appeals.

Assessment of Fees/Cost of Construction

Following the completion of sidewalk improvements by the DOT, the notice of assessment is issued to property owners.

Article 26 of the Baltimore City Code outlines the process for the assessment of fees associated with sidewalk repairs. The following sections are relevant to how the assessment is collected:

- *Subtitle 10 Section 6*
 - The only exception to the policy for sidewalk repairs is when damage to a sidewalk is clearly caused by a city-owned tree. In this circumstance, Baltimore City is responsible for the cost of necessary repairs.

- *Subtitle 10 Section 9*
 - If the property owner must pay the assessment, the Finance Department collects the payment in the same manner that real estate taxes are collected.
 - Property owners who receive the Homeowners Tax Credit may use their credit to pay the assessment.
 - The Board of Estimates has a fixed cost for sidewalk repairs at \$6.50 per square foot.
 - Property owners can pay in full, within 30 days, without incurring interest on the assessment.

- *Subtitle 10 Section 7*
 - If the cost of sidewalk improvements is greater than \$100, property owners may agree to a deferred payment plan.
 - The term of the plan may not exceed five years and the interest percentage is determined by the Director of Transportation and the Board of Estimates.
 - Sidewalks improved under a streetscape plan may have a deferred payment plan last up to 10 years with interest rates consistent with the rates in the plan.

Project Prioritization and Delivery

Sidewalk repairs are identified based on 311 requests. Sidewalks are currently prioritized based on the 311 request backlog. A condition assessment protocol has been developed in the Complete Streets Manual for the City to use to inspect and prioritize sidewalks going forward.

The Complete Streets Manual outlines the condition assessment protocol and the future project prioritization process. The following sections are relevant to how projects will be prioritized:

- *Implementation Chapter: Project Prioritization*
 - The project prioritization process for sidewalks is divided into four parts.
 - Sidewalks undergo a condition assessment, where they are judged on a scale of 1 to 5. Sidewalks that score a 1 are in good condition and ADA compliant while sidewalks that score a 5 are in poor condition and must be replaced as soon as possible.
 - To ensure safety, all sidewalks with a score of 5 on the Condition Assessment Test are prioritized and repaired regardless of other factors.
 - After those sidewalks are prioritized, sidewalk needs are identified, with an emphasis on sidewalks that score a 4 on the Condition Assessment Test.
 - Lastly, an equity assessment is applied. After immediate safety issues are identified, the remaining budget is dedicated to repairing sidewalks with a Condition score of 4 in the two highest-rated equity zones.

Capital Improvement Budget Allocation

The budget for the Sidewalk Reconstruction program is outlined in the Capital Improvement Plan with a breakdown of funding sources.

The Baltimore City Capital Improvement Budget Report outlines how much money is budgeted for sidewalk repairs and where the funding comes from. The following sections are relevant to how sidewalk repairs are funded:

- *FY 2021 CIP Report*
 - The Board of Estimates recommends \$4,000,000 in Fiscal Year 2021 for sidewalk reconstruction and repair funded through General Obligation Bonds and Private Payments.
- *Baltimore City Capital Improvement Program Fund Source Description*
 - General Obligation Bonds are voter-approved bonds that allow the City to borrow money for specific improvements. The bonds are debt secured by the full faith and credit of the City and are a flexible fund source that allow the City to maintain high priority capital assets and programs.
 - General Funds are revenue received from various payments to the City, such as property taxes. General Funds are mostly used for the City's operating budget, but a certain amount is allocated for capital

improvements. A portion of the funds come from State Highway User Revenue, which is restricted for certain purposes like transportation projects.

- The Maryland Department of Transportation issues bonds to be repaid with future Highway User Revenue.
- Private payments come from property owners.

Appendix B: Baltimore Sidewalk Repair Process

Article 26 Sidewalk Repair Process

1. The need for sidewalk improvements is determined through citizen 311 requests and Department of Transportation inspections.



2. The DOT provides property owners with notice of the sidewalk defect(s) and their intent to improve, pave, repave, grade, or repair the sidewalk. Property owners can appeal the need for repairs to the Board of Municipal and Zoning Appeals.



3. If there are no appeals and/or the Board approves the project, the DOT repairs the sidewalk, unless the property owner decides to do it.



4. When the repair work is completed, the DOT must produce records about the work including the location of the sidewalk, the total cost of the project, and the cost being assessed against each abutting property. The DOT must then publish notice of the records for the public to see.



5. The DOT must hear any affected property owners within 10 days of the notice being issued and then send out the assessments. Property owners may appeal the assessment to the Board of Municipal and Zoning Appeals within 30 days of receiving it.



6. After the appeal period, DoT reports the assessments to the Finance Department, who collects them in the same way property taxes are collected. All assessments are due when they are reported to the Finance Department and may be paid in full at once or through a deferred payment plan.

Appendix C: Outside City Sidewalk Research

Washington DC

Maintenance Responsibility:

- The City is responsible for sidewalk maintenance and repair.
- Business Improvement Districts can opt into contracts where they complete sidewalk improvements and get reimbursements from the City.

Funding:

- Washington DC receives Federal Highway Administration (FHWA) funding for work on federal routes. There is a pot of money to do work on local roads, which amounts to about \$20,000,000 for Fiscal Year 2021.

Project Identification:

- 311 is used to identify sidewalk repair projects. Residents provide information about the type of sidewalk material and the severity of the damage. The request is put into a tracking system and residents receive a service request number.
- Inspectors are dispatched daily to survey service requests. Inspectors determine if the requests are warranted of repair and define the scope of necessary work.
- DC considers the age of outstanding service requests when making repairs, giving priority to older requests. Proximity to sensitive populations like rec centers, senior living, and schools is taken into consideration when prioritizing locations for sidewalk repair.
- Washington DC does an ADA compliance survey every two years to gather data about sidewalk compliance. The City has information about sidewalk conditions from a Condition Assessment Test that was conducted 4-5 years ago.

Project Prioritization:

- New sidewalk construction is prioritized for streets that have ongoing roadway reconstruction projects, streets near schools, parks, recreational facilities, and transit stops, and roads where the absence of a sidewalk creates safety risks.
- Roads where residents have petitioned to have sidewalks put in are prioritized as well. The level of current pedestrian activity and community support is considered.
- Installation of new sidewalks is reflective of cost, the feasibility of construction due to topography and trees, and whether sidewalk connectivity is maintained by continuing the sidewalk.

St. Louis

Maintenance Responsibility:

- Property owners are required to maintain their sidewalks in good repair.

Funding:

- St. Louis offers property owners a cost-sharing option through the 50/50 sidewalk program. Through the 50/50 sidewalk program, property owners pay 50% of sidewalk repair costs and the City pays the remaining 50%.
- The sidewalk reconstruction program is funded by individual councilmembers through their council district capital allocations from the City. For Fiscal Year 2021, each council member gets about \$145,000 to fund numerous capital projects, including the 50/50 sidewalk program.
- If the sidewalk has been damaged by the roots of a City tree, the City pays 100% of the cost to repair the affected slabs.
- If a property owner wants to repair the sidewalk at their own expense, they need to get a permit and they cannot be reimbursed through the 50/50 program.

Project Identification:

- Property owners can contact the Citizens' Service Bureau to request a sidewalk inspection. After the service request is submitted, inspectors assess the condition of the sidewalk. Only properties in certain areas are eligible for repairs by the City and all property taxes must be paid in full.
- Properties are placed on the waiting list in their council district after the service request is processed. The length of the waiting list depends on the amount of funds available in each district and the number of outstanding requests. Prior to work being done, property owners get a letter detailing their share of the costs.
- Complaints are logged through Cityworks. Operators take calls through 311 and take complaints through the City's website and social media accounts. Anyone can report any sidewalk. The City sends a letter to a property after the report is filed, stating that they have been added to the sidewalk program with a cost estimate. If property owners choose not to participate in the City repair process and the sidewalk is found to be dangerous, the City starts a citation.

Project Prioritization:

- Sidewalk repairs are first-come, first-serve based on the waiting list in each individual council district. Councilmembers receive money for capital improvement work from the City and the Streets Department has to convince them to spend it on repairing sidewalks. The sidewalk repair program works well when it is funded and does not work well when it is not funded.

Philadelphia

Maintenance Responsibility:

- Property owners are responsible for sidewalk repair and maintenance. The City Code says that sidewalks must be kept in good repair at the expense of property owners.

Funding:

- The amount that property owners as a group are required to pay cannot exceed 30% of the total cost of the project. The City is responsible for covering the remaining 70%.

Project Identification:

- A City inspector determines when a sidewalk needs to be fixed and can have the work done by a contractor.
- A property owner can issue a complaint about a sidewalk through 311 or an online channel. The sidewalk is then inspected and if the sidewalk is deficient, the property owner is mailed a notice. The property owner has 30 days to address the defect, but there is no recourse for the City to make sure that the sidewalk is fixed.

Project Prioritization:

- Projects are prioritized based upon 311 requests and action from property owners to respond to notices.

New Orleans

Maintenance Responsibility:

- The City is responsible for routine maintenance of sidewalks. If the City determines that a property owner damaged the sidewalk, or something on private property like a utility or a tree is causing the damage, DPW will request that the property owner repair the sidewalk at their expense.

Funding:

- Residents pay for sidewalk repairs only if they directly impact, damage, or remove the sidewalk in the right-of-way. The most common scenario is when a new house requires utility service connections that impact the sidewalk. The cost depends on the contractor, but it is about \$120/square yard when the city utilizes one of its maintenance contractors.
- All payments by property owners go into the general fund. DPW uses its own operating budget to make minor sidewalk repairs. When a more comprehensive repair is needed, DPW uses local bond funding. Two neighborhoods, the French

Quarter and Downtown, tax residents and businesses a special tax for the purpose of infrastructure repairs in their area. DPW manages the funds from the taxes and determines how funding will be spent.

- DPW typically receives between five and fifteen million dollars each year for enhancement projects like sidewalk repairs.

Project Identification:

- Sidewalk repair projects are identified through the 311 system, the City's online complaint form, and requests from council members.
- DPW has inspectors who inspect 311 complaints daily. They use a rating system from 1 to 5 to help prioritize locations for repair. DPW relies mostly on 311 complaints for inspections and does not have a regular sidewalk condition assessment protocol.
- After complaints are processed by 311, property owners are notified of any changes or actions to their case by DPW through email. If the sidewalk is in such disrepair that it cannot be fixed through the typical DPW protocol, it is placed into a bond-funded project as part of a capital improvement project.

Project Prioritization:

- Priority is given to critical sidewalks from the condition assessment. The city also prioritizes ADA compliance with a focus around highly pedestrian-traveled areas.
- Capital improvement projects typically replace the entire sidewalk and ADA curb ramps. Priority is given based on the condition of the subsurface utilities and/or roadway pavement. In 2015, the city did a total condition assessment to determine which blocks should receive work first.

Memphis

Maintenance Responsibility:

- Property owners are responsible for keeping their sidewalk in good repair and open for public passage.
- A work permit is needed before a property owner, private contractor, or city contractor can repair a sidewalk. The fee is 24 cents/square foot for residential properties and 48 cents/square foot for commercial or industrial properties. The minimum fee is \$10 per permit. If the City completes the repair, the permit fee is added to the cost assessment.

Funding:

- Property owners are responsible for any costs relating to repair and maintenance. The City may choose to make any necessary repairs and charge

the property owner. The City offers financial assistance to certain residential property owners based on age, physical ability, and income, but residents have to apply for the assistance.

Project Identification:

- Citizen 311 requests are made over the phone or online. After receiving the complaint, the City notifies property owners of their responsibility. The City proceeds through a legal process, as necessary, to ensure that repairs are completed.
- Property owners receive notice if they fail to build, repair, or keep clean and open for public passage any sidewalk abutting their property. The notice specifies what is required of the property owner and states that if the work requirement is not carried out within 30 days of the notice, the city will complete the work at the expense of the property owner.
- Property owners can choose any contractor to make sidewalk repairs, but the contractor must be properly bonded for concrete sidewalk work and permitted by the city to ensure proper installation.

Project Prioritization:

- If a property owner thinks a tree is causing damage to the sidewalk, they can request a review by the Memphis Tree Board. The group is composed of certified arborists to help develop creative solutions to repair sidewalks with the tree's well-being in mind.

Boston

Maintenance Responsibility:

- Property owners are not responsible for sidewalk maintenance and do not pay for sidewalk repairs. The City pays for repairs, except when the damage is associated with utility work or construction. In these cases, the utility or construction company pays for repairs.
- If a property owner wants to make sidewalk repairs themselves or through a private contractor, a sidewalk deposit and permit is required. The deposit ensures that if the sidewalk is built incorrectly, the City has the funds to make the repairs. Once the sidewalk repair is completed, the City inspects the sidewalk and if it passes, the deposit is refunded minus administrative fees (\$100 inspection fee and \$60 permit fee). The deposit is calculated based on the square footage of the sidewalk. Concrete is \$10/square foot, brick/pavers is \$17/square foot, and asphalt is \$7/square foot.

Funding:

- The annual sidewalk contract is funded through Chapter 90 state grants and General Obligation Bonds.
- Massachusetts Highway Department Chapter 90 funds are allocated by formula through state bond authorizations. It is used for roadway and sidewalk reconstruction and resurfacing. Boston additionally utilizes a Transportation Infrastructure Enhancement Fund, where transportation network companies like Uber and Lyft annually submit a per-ride assessment of 20 cents based on the number of rides from the previous year. ½ of the assessment is proportionally distributed to municipalities based on the number of rides that originated there.
- For Fiscal Year 2021, Boston budgeted \$3,000,000 for sidewalk reconstruction in the capital budget.

Project Identification:

- Boston has three approaches to sidewalk repair:
 - Annual capital improvement contracts.
 - Spot repairs requested through 311.
 - Sidewalk repairs based on sidewalk deposits.
- 311 operates as the work order management system. Inspectors determine what type of temporary or permanent work is needed based on the constituent request. Constituents can track their case and receive notice about timing for temporary and permanent fixes.
- There are regular analyses of sidewalk conditions. The assessment is usually whether the issue can be addressed quickly with asphalt or if the whole block needs to be replaced.

Project Prioritization:

- The Streetcaster Program aims to create sidewalk networks in neighborhoods that have previously been neglected by 311 requests and to shift response framework to one of proactive planning. The framework uses a social vulnerability score for census blocks based off of six factors:
 - The number of low income people.
 - The number of people over 65 years old.
 - The number of people under 8 years old.
 - The number of people with a high school education or less.
 - If the neighborhood is a linguistically isolated neighborhood.
 - If the neighborhood has minority communities.

- These factors, in conjunction with the condition of the sidewalk and the importance of each sidewalk block to the sidewalk network, are used to help prioritize projects in the communities that need them most.

Columbus

Maintenance Responsibility:

- Sidewalk maintenance is the responsibility of the abutting property owner. Property owners pay for sidewalk repairs done by the City through their property tax assessment.
- Developers are required to provide sidewalks within all new developments. In developments where an addition to an existing building or structure is 50% or more of the original square footage, sidewalks must be added.

Funding:

- Property owners are responsible for paying for sidewalk repairs, but they may qualify for the Sidewalk Grant Repair Program. The goal of the program is to make funds available to low-income residential property owners and business owners in Neighborhoods Commercial Revitalization districts to help them pay for sidewalk repairs.
- Grantees receive up to \$2,500 or the cost of approved repairs, whichever is less. Grants are dependent on the availability of funds and property owners are responsible for payment of any repairs in excess of their grant. Only non-compliant or damaged sidewalks within the right-of-way are eligible for repair by the grant program.
- Property owners can request to make repairs themselves by hiring a private contractor. The City inspects the sidewalk after the work is completed to ensure proper compliance. Property owners that make their own repairs must submit receipts for all expenses that they are claiming grant reimbursement for.
- The applicant must own the property and have occupied the property for at least 12 months prior to the grant application. Property taxes must be current. Eligible residential properties must have a total household income of 80% or less of the area median income, with adjustments for household size.

Project Identification:

- Residents may put in a request through 311 to repair the sidewalk or construct a sidewalk where one does not exist. All sidewalk service requests are tracked and scored against a set of criteria. The City can elect to construct new sidewalks in conjunction with a roadway improvement project like a roadway widening or streetscape project.

Project Prioritization:

- The criteria that the City uses to evaluate requests include sidewalk route continuity, proximity to schools and parks, etc. Requests that score the highest are the first to be considered for future sidewalk projects, which are all based on available funding.
- An additional means of sidewalk development is through the Urban Infrastructure Recovery Fund. UIRF is a central city improvement program that was established to create a specific capital improvement fund for older neighborhoods. UIRF provides funding for infrastructure improvements such as new sidewalks (repairs to existing sidewalks cannot be funded through UIRF).

Denver

Maintenance Responsibility:

- Property owners are responsible for the repair and maintenance of sidewalks adjacent to their properties. If sidewalk repairs are not made by the property owner within 45 days of the City issuing a repair notice, the city may use its contractor to make repairs and bill the property owner.

Funding:

- Property owners pay for sidewalk repairs.
- The City offers extended repayment assistance and affordability discounts to property owners who qualify. Eligible residents own their property, have received a repair notice, select the city to perform repairs, and meet the household income criteria to apply.
- The affordability discount is a discount on the cost of repairs. The lower the household income, adjusted for household size, the larger the discount.
- The extended repayment assistance program allows qualified property owners to repay the City for the cost of sidewalk repairs by making annual payments in 3 installments with a 1% annual loan fee. The length of the repayment program is typically up to 5 years.
- For Fiscal Year 2020, Denver budgeted \$3,000,000 for the sidewalk gap and safety repair program. Denver budgeted an additional \$850,000 for the Sidewalk Repair Revolving Fund, which funds zone-based inspections, the extended repayment program, and the affordability discounts.

Project Identification:

- Inspectors divide the city into 11 regions for zone based sidewalk inspections. Inspectors focus on one region at a time to inspect the sidewalks and offer

property owners recommendations on repair options. Inspectors provide information on repair requirements, estimated costs, extended repayment, and the affordability program.

- Property owners can report hazardous sidewalks outside the region where the repair program is operating, but property owners outside the region who are noticed for hazardous sidewalks must use their own contractor and will not be able to use the city's sidewalk repair contractor, extended repayment program, or repair affordability program.
- The goal of the zone based inspection program is to address damaged, sloping, and uneven sidewalks, not install missing ones.
- 311 is used to report damaged or hazardous sidewalks in the public right-of-way. Complaints are directed to an inspector for review.

Project Prioritization:

- The order for which regions are inspected is prioritized based on criteria such as:
 - Which regions have the lowest rates of car ownership.
 - Which regions have the highest population of youth, seniors, and people with disabilities.
 - Which regions have more damaged sidewalks in proximity to schools and transit.
 - Which regions have more damaged sidewalks along arterial streets.
 - Which regions have the closest streets to transit.

Detroit

Maintenance Responsibility:

- Property owners are responsible for cleaning and maintaining the sidewalk adjacent to their property, keeping the sidewalk in good repair, and free from hazardous conditions.
- Sidewalks damaged by tree roots may be replaced by the City, but certain criteria must be met in order for free replacement to occur.
- DPW may repair sidewalks after giving the property owner notice and an opportunity to repair the sidewalk. Property owners are responsible for paying the cost of any sidewalk repairs performed by DPW.

Funding:

- If the city completes the repair, the property owner pays the repair costs. The cost of all repairs shall be collected through a special assessment on the property owner's tax bill.

Project Identification:

- Property owners can hire a contractor to complete the repairs or do it themselves. In both cases, permits must be obtained. Construction must adhere to ADA requirements.
- Sidewalk damage can be reported through 311 or the arcGIS Sidewalk Damage Reporter Map.
- Within 60 days of a property owner reporting a sidewalk uplifted by a City tree, an inspector will assess the damage. The inspector will document the type and extent of the damage in accordance with criteria such as how high the sidewalk is lifted, the number and width of cracks in the sidewalk, and the condition of the tree causing damage.

Project Prioritization:

- If the City elects to repair or replace a sidewalk, the time frame for repairs is dependent upon the rating of the damage, available funding, and other factors.
- If a sidewalk is scheduled for repair, an inspector will mark the sidewalk and indicate the type and extent of repair. Prior to construction, property owners are notified that work will begin and barricades are placed. Crews come to remove the concrete, re-grade the area and trim tree roots as needed, pour and finish the new concrete, and restore the area disturbed by construction activities.

New York City

Maintenance Responsibility:

- NYC has 12,750 miles of sidewalk and relies on property owners to maintain the portions adjacent to their property. New York Code says that property owners are responsible for repairing and maintaining sidewalks adjoining their property.

Funding:

- Property owners have 90 days to pay the sidewalk repair bill issued by DOT before interest is added. After 90 days, interest will accrue and a monetary lien is placed against the property. Property owners can request a payment plan through 311.
- If the sidewalk defect is caused by the roots of a City tree, property owners can request repair through Parks and Recreation's Tree and Sidewalk Program. This program is only available for sidewalks adjacent to 1/2/3 family homes occupied by the owner. Parks and Recreation offers free consultations for property owners doing work around tree roots. DOT does not charge property owners for repairs to tree-damaged sidewalk flags.

Project Identification:

- 311 is used to identify sidewalk needs. DOT staff inspects the sidewalk based on the 311 complaints and notifies property owners of needed repairs.
- Sidewalk inspections are complaint driven. When a complaint is made, DOT inspectors inspect the sidewalk at that location and the entire sidewalk on that side of the block.
- If an inspector finds a defect with the sidewalk, DOT sends a notice of violation and a preliminary inspection report (an illustration of the sidewalk and the location of the defect) to the property owner. The notice allows property owners 75 days to repair the sidewalk through a private contractor or defer to the city contractor.
- If the property owner does not make the repairs within 75 days, the City may hire a contractor or make the repairs through DOT and charge the property owner for the cost. Property owners can request a re-inspection within 75 days if they disagree with the preliminary inspection report. This process only applies for 1/2/3 family properties. Commercial/4+ family properties must always complete their own repairs.
- A sidewalk construction permit is needed for repairs to begin. The permit covers the administrative costs of obtaining the permit and the cost of the dismissal inspection. The permit does not extend the 75 day period that property owners have to start repairs and property owners must call 311 to have the dismissal inspection take place.

Project Prioritization:

- Property owners of 1/2/3 family homes may apply for DOT's Expedited Sidewalk Repair Program. If approved, DOT begins repairs within 90 days of processing the request and charges the property owner for the repair costs.
- Property owners with sidewalk damaged by a City tree can repair the sidewalk by hiring an independent contractor or requesting repairs through the Tree and Sidewalk Program. If a private contractor is hired, a Parks and Recreation forester offers site-specific repair solutions for working around the tree and guides the repair process to avoid harm to the tree. Property owners are potentially eligible for city-funded sidewalk repair based on the inspector rating.

Ideas to Increase City Funding for Sidewalk Repairs:

- A fee could be assessed to residents through their utility bills that could fund a sidewalk grant program.
- A percentage of red light camera revenue could go towards sidewalk maintenance.

- A gas tax could be instituted to gather funds for sidewalk maintenance.
- Sidewalk millage taxes can be used for repair and replacement.
- In a Parking Benefit District, increased parking meter fees could be used to provide funding for improvements in the area where the fee is assessed.
- The City could pass legislation to impose a fee on single-use bags provided by retailers at the point of sale. Some of the revenue could be directed to sidewalk repairs.
- A sidewalk impact fee could be imposed on developers to fund pedestrian infrastructure including sidewalk repair. It could be required as a permitting condition for residential and non-residential developments.
- A sidewalk vendor fee could be put in place where licensing fees imposed on sidewalk vendors like food trucks could go to sidewalk repairs. It would need to be reasonable to not deter sidewalk vendors from operating.
- The City could increase enforcement of sidewalk parking. The revenue could be used to fix sidewalks.
- Baltimore could enact a realty transfer tax levied when properties are sold.

Ideas to Improve City Inspection Methods:

- Revolving, zone-based inspections with 311 spot inspections could be instituted as City protocol to ensure that all city sidewalks are inspected on a regular basis. Splitting the City into zones can focus inspections and repair crews on smaller geographic areas. Baltimore can save time and money by grouping sidewalk inspection and repairs with other roadway initiatives.